

Responses to Comments in State Agency Letter 1 from Lisa Kelley, WCC Environmental Specialist, Washington State Parks and Recreation Commission

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the comment letter.

1. Section 3.9 of the Draft EIS acknowledged that from most areas of the John Wayne Trail the visual quality of views toward the project site would be rated moderately high. However, because of the trail's character as an engineered right-of-way parallel to utility lines, the moderate level of trail use, and the middle ground viewing distances toward the project area, the projected degree of visual change is expected to result in a low level of overall visual impact. Regardless of this conclusion, the Draft EIS recognized that for many viewers the project would result in a significant unavoidable adverse impact because it greatly alters the appearance of the rural landscape.
2. The Draft EIS recognized bird watching as a recreational activity near the project site. As described in Section 3.2.3 of the Draft EIS (see Turbine Avoidance), based on the available information, it is probable that some turbine avoidance impacts may occur to the grassland/shrub-steppe avian species occupying the project area. The extent of these effects and their significance are unknown and hard to predict. Avoidance by avian species is expected to range from several hundred feet to no avoidance behavior. Impacts on avian species would be considered low. The project is not expected to affect wildlife viewing or recreational bird watching activities on publicly accessible lands.
3. Section 3.2.3 of the Draft EIS acknowledged that because passerines make up the majority of avian observations in the project area, they would likely make up the largest proportion of fatalities. The Final EIS reports that based on the per turbine mortality estimates from other wind power projects studied, between 30 and 200 passerine fatalities may occur per year for a project with up to 65 turbines. .
4. The Washington State Parks and Recreation Commission is on the KVVPP mailing list and will be notified of all future events and available information related to this project.

Responses to Comments in State Agency Letter 2 from Ted A. Clausing, Regional Habitat Program Manager, Washington Department of Fish and Wildlife

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the comment letter.

1. Thank you for your comment.
2. Please see revisions to Section 3.2.4 of the Final EIS for updates to proposed mitigation measures. Mitigation measures will be implemented and monitored through the project's Site Certification Agreement (SCA), should the governor approve the project. The SCA contains all of the environmental, social, economic, and engineering conditions for construction and operation that the Applicant must meet throughout the life of the project (including SEPA mitigation measures).
3. Specific construction timing and the effects this may have on soils and vegetation will be addressed in further consultation between the Applicant and the Technical Advisory Committee (TAC).
4. Please refer to Response 3 of this letter.
5. In consultation between the Applicant and Ted Clausing, WDFW Regional Habitat Program Manager, WDFW clarified that identifying and selecting reference sites to evaluate the success of the restoration and mitigation efforts at the KVVPP site would be an excellent first task for the TAC to undertake. WDFW also clarified that the intent of identifying the reference sites is not as a trigger for additional mitigation, but rather to enhance understanding of the effectiveness of various mitigation strategies, and therefore to inform future policy making (Taylor, pers. comm., 2004).
6. Section 3.2.4 of the Final EIS has been revised to indicate that all temporarily disturbed areas would be reseeded with an appropriate mix of native plant species at the next suitable planting window after construction is completed. References to implementation of temporary erosion control measures, and trenching procedures have also been added.
7. The recommended enhancement measures at the proposed habitat mitigation site are identified as mitigation measures and will be implemented and monitored through the project's SCA. See Response 1 of this letter.
8. Thank you for your comment.
9. A parenthetical explanation regarding the definition of "grassland" has been included in Section 3.2.2 of the Final EIS. While WDFW would calculate the mitigation needs and ratios presented in Table 3.2-13 of the Draft EIS differently (e.g., applying the 2:1 shrub-steppe mitigation ratio to "grassland" habitat as noted in Comment 8 of this letter), this change would not affect the adequacy of the proposal.

10. Thank you for your comment.
11. The Applicant has agreed to allow controlled hunting within the project area, including on the proposed mitigation parcel, in coordination with the WDFW to manage the elk and deer populations. Hunting on Washington State Department of Natural Resources lands is controlled by the agency, but the Applicant has agreed that its activities on leased state lands would not restrict or otherwise preclude controlled hunting. These efforts would also prevent creation of a sanctuary effect that could lead to greater agricultural damage to farms and ranches in the area from big game. Section 3.2.3 of the Final EIS has been revised to address these concerns.
12. Please refer to Response 11 of this letter.
13. The cost of freestanding meteorological towers is substantially greater than meteorological towers with guy wires. However, the Applicant is willing to commit to using freestanding meteorological towers as an additional mitigation measure to further reduce the potential for avian and bat impacts. Furthermore the Applicant commits to installing up to 5 meteorological towers total. Please see revisions to Section 3.2.4 of the Final EIS.
14. Please refer to Response 13 of this letter.
15. Please refer to Response 13 of this letter.
16. The January 2003 Application for Site Certification included a Draft Biological Assessment in case Section 7 of the Endangered Species Act (ESA) was applicable. However, because there is no federal nexus with the project, Section 7 consultation does not apply. The Draft Biological Assessment is being used to assist in preparation of a Habitat Conservation Plan (HCP) pursuant to the requirements of Section 10 of the ESA (Erickson, Prefiled Testimony, Exhibit 29).

Under Section 10 of the ESA, private individuals and states may receive exemptions from the prohibitions on incidentally “taking” (i.e., harming) species. An incidental take permit can be obtained to perform research, develop land, or conduct any legal activities not directed at harming the species. As a requirement to obtain an incidental take permit to develop land, the landowner must formulate an HCP. HCPs allow development of portions of habitat used by listed species in exchange for the creation and implementation of a plan designed to conserve the same species in the remainder of the habitat. The overall purpose of the habitat conservation planning process (Section 10 of the ESA) is to provide a means by which the U.S. Fish and Wildlife Service (USFWS) can issue an incidental take permit to non-federal entities. This purpose of this permit is to authorize the incidental take of threatened or endangered species from a project and not to permit or authorize the proposed project or activity that may lead to the take. In essence, Section 10 provides a means by which a private entity can legally conduct an otherwise lawful activity that may incidentally take a threatened or endangered species.

The Bald Eagle Protection Act is discussed in Section 3.2.1 of the Draft EIS, Background. An HCP is being developed for the project for potential impacts on bald eagles. Through approval of the HCP, the USFWS can issue an incidental take permit for the possible take of bald eagles during the project.

Furthermore, the USFWS, or any party the USFWS designates as responsible (e.g., state wildlife agency) in the HCP, will monitor the project for compliance with the terms of the incidental take permit or HCP. The USFWS must monitor the Applicant's implementation of the HCP and the permit terms and conditions to determine if there are any violations (Erickson, Prefiled Testimony, Exhibit 29, Exhibit 29R).

17. The KVVWPP area is characterized by human disturbance and is therefore not considered a likely or probable location for the reintroduction or reestablishment of historic grouse populations. These species tend to avoid areas of human activity, such as the highways, transmission lines, county roads, and scattered rural residences at the KVVWPP site (Taylor, pers. comm., 2004). Therefore, the KVVWPP would not contribute to any potential adverse cumulative effect on the sharp-tail or sage grouse populations.

Responses to Comments in State Agency Letter 3 from John Lane, Assistant Attorney General, Counsel for the Environment, Attorney General of Washington

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the comment letter.

1. Please refer to Key Issue A in Section 2 of this volume regarding project definition.
2. As shown in Table 2-4 of the Final EIS, the rotational speed of the size of turbines under consideration would be in the range of 10 to 23 rotations per minute. Larger turbines (410 feet high) are expected to have a slower rotation speed of 17 to 20 rotations per minute. Regardless of the specific type, composition, or size of turbine ultimately selected, the design must meet strict criteria to ensure that any given turbine design is safe. The selected turbine blade geometry and design will be based on aerodynamic performance, manufacturability, material behaviors, and adequate overall strength to withstand the load requirements set forth by a number of standardizing institutions and agencies. Testing will be completed to analyze and verify that all critical load carrying components of the wind turbines meet the strength and fatigue load endurance requirements set forth by the safety standards. Please see Jorgensen, Prefiled Testimony, Exhibit 37 and Bernay, Prefiled Testimony, Exhibit 38 for more information regarding turbine reliability and performance as related to public safety concerns.
3. If EFSEC recommends and the governor approves the project, a more specific standard would be defined to measure the meaning of what constitutes “as close as possible to its original condition.” This standard would be governed by the specific terms and conditions set forth in the Site Certification Agreement (SCA).
4. The Applicant has identified a need for a wind energy project based on analysis of market information and requests by regional utilities for the development of renewable energy sources. There is ample evidence to support the claim that there is a strong and growing interest by Northwest utilities to acquire renewable resources, in particular wind, to meet future resource needs. Because of the continued volatility of gas prices, the increased dry or drought years in the Northwest, and the growing potential for future additional regulation of environmental emissions, utilities are concluding that a diverse portfolio is the best strategy. Many of the major investor-owned utilities and public utilities are finding that wind power is a cost-effective resource today (for more information see Ling, Prefiled Testimony, Exhibit 70). For example, Puget Sound Energy (PSE) estimates that wind energy will be “25 percent cheaper than natural-gas fired power and 5 percent cheaper than coal-fired power” (Duryee 2004). Passage of initiative I-937 in November 2006 will further increase the need for renewable energy resources. I-937 requires that by 2020, 15% of the electricity from Washington's largest utilities comes from renewable energy sources.

As of September 2004, the vast majority of wind power being produced in the Pacific Northwest (defined as Washington, Oregon, Idaho, and Montana) was in Washington and Oregon. For example, there is approximately 280 and 260 MW of installed wind power in

Washington and Oregon, respectively, with an additional 645 MW of planned capacity in Washington, including the proposed KVVPP(AWEA 2004a). The Wild Horse Wind Power Project, is expected to begin commercial energy production in December 2006, bringing 229 MW on-line (Diaz 2006a).

For three of the four Pacific Northwest utilities actively seeking to integrate renewable energy sources into their system (PSE, Avista Corporation, and Portland General Electric), a total of 395 MW is currently being solicited for wind power capacity. Further discussion of how much wind power capacity the regional utilities are seeking is provided in Section 3.5 of the Draft EIS.

Section 3.5.1 of the Final EIS has been updated to reflect recent changes in the demand for wind power by local utilities that have occurred since publication of the Draft EIS. For example, Puget Sound Energy's Wild Horse Wind Power Project, is expected to begin commercial energy production in December 2006, bringing 229 MW on-line (Diaz 2006a).. PSE also estimated that by 2008 it would need power sources that could generate 350 MW more power to serve its growing number of users (Duryee 2004). Furthermore, in February 2004 PacifiCorp issued a request for proposals for up to 1,100 MW of renewable resources, including wind.

SEPA regulations (WAC 197-11-440[4]) require the EIS to specify the purpose and need to which the proposal is responding. The regional demand for wind-generated energy exceeds the existing regional supply. This economic fact supports the underlying need for the project.

5. Section 2.7 of the Final EIS has been revised to redefine the No Action Alternative. If the proposed project is not constructed, the region's need for power would likely be addressed by a combination of energy efficiency and conservation measures on the user's end, by existing power generation sources, or by the development of new renewable and nonrenewable generation sources. Baseload demand would likely be filled by expanding existing or developing new thermal generation sources, such as gas-fired combustion turbines. The evaluation of impacts has been revised throughout Chapter 3 of the Final EIS to reflect this change in definition of the No Action Alternative.
6. While it is universally acknowledged that lithosol habitat is sensitive and difficult to restore, the amount of lithosol soils that would be both temporarily and permanently disturbed by the project is not considered large relative to the amount of lithosol that is anticipated to exist countywide.

According to Randall Krichbaum (Prefiled Testimony, Exhibit 30), "while the extent of lithosol habitat that would be disturbed by the project has been calculated, the total extent of lithosolic types in the local vicinity and in the region is not known with precision. The regional extent of lithosol habitats in the Columbia Basin is difficult to estimate. Small-scale vegetation and soils maps typically do not break out lithosol sites. During the prefield review for the project, [the Applicant's consultants] conducted a document and data search to identify existing maps and spatial data suitable for use in delineating

lithosol habitats in the project vicinity...WDFW has carried out no studies to quantify lithosols, and no directly applicable information was found.

However, [qualitative] observational evidence suggests that lithosol habitats are not uncommon in the general project vicinity. There are several wide, sloping ridgelines in the project area composed almost entirely of shallow-soiled habitats. In many places, this contiguous habitat extends for hundreds of meters on both sides of the project impact corridors. Furthermore, in accessing the project corridors, the field botanists crossed other extensive patches of lithosol on adjacent ridgelines. This would suggest that the lithosol area to be affected by the project likely represent only a small and regionally insignificant proportion of the total lithosol habitat in the vicinity.”

7. If the Applicant chooses to upgrade the equipment at the KVVPP site at any time, EFSEC will review the proposed activities and determine if all or part of the KVVPP EIS can be used to meet its responsibilities under SEPA. This review and assessment would occur before EFSEC extends time on the KVVPP permit or allows equipment upgrades. Depending on the nature of the activity, an EIS Addendum may suffice; an addendum adds analyses or information about a proposal but does not substantially change the analysis of significant impacts and alternatives in the existing environmental document (WAC 197-11-600). A Supplemental EIS would be required, however, if there are substantial changes so that the proposal is likely to have significant adverse environmental impacts or if there is new information indicating a proposal’s probable significant adverse environmental impacts.
8. No significant impacts are expected to result from the remaining portions of the turbine foundations in place at the project site. You refer to cement being left in the ground after the first 3 feet of foundation have been removed below grade. The turbine foundations would be made of reinforced concrete (of which cement is one component), an inert substance. The only possible impact that could result from leaving concrete foundations in the ground would be to restrict the type of earthwork that could be conducted on these sites. Earthwork would most likely be associated with future development. Landowners leasing property to the Applicant for this project are aware of these decommissioning plans and future restrictions on their property.
9. No anticipated impacts are associated with leaving the underground electrical collections system in place. Please refer to Response 8 of this letter.
10. If EFSEC recommends and the governor approves the project, the specific requirements of decommissioning, including financial assurances from the Applicant, would be governed by the terms and conditions set forth in the SCA.
11. We are not aware of any tax credit that may be available to the project. The construction cost estimate reflects the Applicant’s assumptions about the project’s tax savings, such as the exemption from state sales tax for project equipment. You may be referring to the Production Tax Credit available to renewable energy facilities. In 1992, the Energy Policy Act was signed into law and included enactment of a production tax credit under

Section 45 of the Internal Revenue Code of 1986. This credit was available to corporate entities building new renewable energy production facilities such as solar, biomass, wood chip, geothermal, and wind power production plants. The credit was available to new renewable energy facilities placed into commercial service after the law was enacted and before the latest deadline of December 31, 2003 (PSE 2003).

A bill reestablishing the production tax credit passed both houses of Congress in late September, and President Bush signed the measure in early October 2004. This bill provides a 1.8-cent credit for each kilowatt-hour of electricity produced by qualifying turbines built by the end of 2005 for a 10-year period (Smith 2004). Tax subsidies such as the production tax credit are common in energy markets and have been provided to traditional energy industries (hydro, coal, oil, nuclear) for decades. The production tax credit and other factors have helped reduce the cost of wind energy to the point where it can be competitive with other resources (Bonneville and Benton County 2003). However, while the production tax credit is important to the Applicant to ensure an adequate return on investment, it is not certain that the project would not be developed if the production tax credit were not available.

Finally, the SEPA rules (WAC 197-11-448) do not require agencies to address concerns such as tax treatment of the wind energy industry in an EIS. The statute and rules envision general economic considerations, such as tax treatment, as factors decision-makers would evaluate apart from the environmental impacts addressed in an EIS. In addition, WAC 197-11-448(3) states that examples of information that is not required to be discussed in an EIS include methods of financing proposals.

12. Avian mortality data have been collected at more than 20 wind power projects, many of which are located in areas bald eagles are known to use, and no bald eagle fatalities have been reported.

Please refer to State Agency Letter 2, Response 16 regarding the permitting process for an incidental take of a bald eagle. The bald eagle is a federally threatened species, whereas the golden eagle is not federally listed but is a state species of concern. Golden eagles, while not protected under the incidental take permitting process associated with the ESA, are still protected under the Bald Eagle Protection Act.

13. The Applicant proposes to develop a post-construction monitoring plan for the project to quantify impacts on avian species and to assess the effectiveness of mitigation measures. The monitoring plan will include the following components: (1) fatality monitoring involving standardized carcass searches, scavenger removal trials, searcher efficiency trials, and reporting of incidental fatalities by maintenance personnel and others; and (2) a raptor nest survey within 1-mile of the project site for a minimum of one breeding season to locate and monitor active raptor nests potentially affected by the construction and operation of the project.

To address concerns regarding the possibility that avian mortality of raptors, passerines, or bats is higher than reported in the EIS, the Applicant proposes to convene a Technical

Advisory Committee (TAC) to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. Membership of the TAC would include representatives from EFSEC, WDFW, USFWS, local interest groups (e.g., Kittitas Audubon Society), project landowners, and the Applicant. The role of the TAC would be to review information regarding mitigation measures and studies that monitor impacts on wildlife and habitat, and to address issues that arise regarding wildlife impacts during construction and operation of the project. If the TAC identifies that initial avian mortality projections are being exceeded, it can make recommendations to EFSEC to rectify the problem. These recommendations would be based on site-specific mortality data but could include decommissioning or moving specific turbine towers.

The TAC would also determine the need, if necessary, for further studies and mitigation measures in accordance with WDFW's *Wind Power Guidelines* (WDFW 2003d). EFSEC will develop the post-construction monitoring plan based on recommendations and coordination with the TAC (Erickson, Prefiled Testimony, Exhibit 29; Erickson, Prefiled Testimony, Exhibit 29R; Clausen, Prefiled Testimony, Exhibit 71-R; WDFW 2004). The WDFW concurs with the Applicant's proposed mitigation measures (see State Agency Letter 2).

14. While the baseline study did not collect primary data for bats and bat habitat in the project area, the Draft EIS assesses existing conditions and potential impacts on bats based on available information. As discussed in Section 3.2.3 of the Draft EIS, Operation and Maintenance Impacts, mortality rates from other wind power project studies were used to estimate raptor, passerine, and bat mortality rates associated with the proposed project.

Existing data regarding the effects of wind power projects on bats are not as extensive as the data available regarding birds. Post-construction fatality studies of wind plants throughout the U.S. have repeatedly shown that the majority of bat fatalities are fall migration bats (Johnson et al. 2000a; Young et al. 2003b; Erickson et al. 2000; Erickson et al. 2003; WEST and NWC 2004; Kerns and Kerlinger 2004). Studies of resident bats at the Buffalo Ridge Wind Plant in Benton County, Minnesota, in conjunction with post-construction fatality monitoring studies showed that resident bats do not appear to be at great risk of collision with wind turbines (Johnson et al. 2003). In addition, fatality studies at other wind plants rarely find spring migrant or summer resident bat fatalities.

The majority of evidence indicates that the bat populations that are at risk of collision with wind turbines are foliage-dwelling migratory bats and, in the Pacific Northwest, hoary bats (*Lasiurus cinereus*) and silver-haired bats (*Lasionycteris noctivagans*). While there is habitat for hoary bats and silver-haired bats near the KVVPP site, local residents of these species would not be at high risk for turbine collision because only fall migration bats are considered at risk from the project.

While the specific risk of collision is unknown, based on the studies to date, it is believed that many of the bats that are at risk of collision with any given wind plant could be from as far north as Canada and/or southern Alaska. Several studies have documented large

resident bat populations near wind plants in the summer when collision fatalities are rare or absent; therefore, the project is not expected to affect bats residing within the nearby Wenatchee National Forest. Bat fatalities that are anticipated at the project site are common species that are widely distributed, including the hoary bat and silver-haired bat, which comprise over 90% of all bat fatalities at existing wind farms in the Pacific Northwest (Kittitas County 2004).

Some researchers have suggested that bats may not echolocate during migration or may not be able to detect turbines in time to avoid them, which might explain the difference between resident and migrant bat fatality rates. However, this has not been empirically proven.

In light of available information and based on coordination with the WDFW and USFWS, a study of resident bat habitat and populations at the KVVPP site was not deemed to be a high priority. Baseline data on bat use have been collected at a number of wind projects that are now operational, but these data have not proved to be particularly useful for predicting impacts (Kittitas County 2004).

Please refer to Response 13 of this letter regarding the TAC; among its responsibilities the TAC would evaluate the mitigation and monitoring program and to address the potential decommissioning or moving of turbines if wildlife mortality rates exceed EIS estimates.

15. Please refer to Response 14 of this letter regarding the adequacy of the bat surveys.

The significance of the impact of bat deaths on the larger biological community is hard to predict because there is very little information available regarding bat populations. Studies suggest, however, that resident bats do not appear to be greatly affected by wind turbines (Johnson et al. 2003; Johnson in press; Gruver 2002) because almost all mortality is observed during the fall migration period. Pre-construction surveys to predict impacts on bats may be ineffective because current state-of-the-art technology for studying bats does not appear to be highly effective for documenting migrant bat use of a site (Johnson et al. 2003b).

16. The proposal to convene a TAC to evaluate the mitigation and monitoring program for biological resources and to determine the need for further studies or mitigation measures will be adopted as part of the project SCA, should the governor approve the project. EFSEC has the regulatory authority to enforce compliance with state laws and the conditions in the SCA through fines or by ceasing construction or operation of the project (WAC 463-54). Compliance determination procedures include consideration of onsite inspections, data analyses, and/or reporting activities as prescribed by EFSEC and performed by other state agencies (including the TAC) pursuant to annual interagency agreements. EFSEC continues this oversight responsibility through site restoration after the project is terminated.

Details regarding the TAC membership selection process, the specific number of TAC members, powers of the TAC, and the TAC decision-making process have yet to be determined. Please refer to Response 13 of this letter for more information on the TAC that will be established to evaluate the mitigation and monitoring program.

Section 3.2.5 of the Draft EIS, Mitigation Measures, states that three years of monitoring studies to evaluate impacts from project operations should occur. After the Draft EIS was published, this agreed-upon time frame for conducting these studies was clarified. Chapter 1 and Section 3.2.4 of the Final EIS have been revised to clarify that, in accordance with the WDFW's 2003 Wind Power Guidelines, the Applicant has proposed a minimum of one year post-construction monitoring, which will be reviewed by the TAC. Following that period, the TAC will recommend to EFSEC whether additional monitoring is warranted.

17. Please refer to Response 6 of this letter.
18. Standard practice in field surveys is to identify where bird traffic occurs over the site relative to the proposed location and height of turbine rotors and to record bird behavior. If such an effort indicates setbacks from ridgelines are necessary to mitigate potential avian impacts, only then should they be used. A mapped summary of raptor observations and flight paths by species is included in Figures 14 and 15 in Exhibit 11 (Wildlife Baseline Study) of the January 2003 Application for Site Certification. This analysis showed that there were no areas of raptor hunting along the ridgelines in the project area, and therefore setbacks from ridges would not be warranted.
19. Areas of lithosolic (shallow-soiled) plant communities at the project site are described as typically in good condition. This characterization is based on field surveys at the project site conducted along a 50-meter (164-foot) survey corridor. The 50-meter corridor did not cover the entire proposed project footprint; therefore, a few areas or ridges were not surveyed (see Draft EIS Figure 3.2-1, turbine string C). It is expected that lithosol habitat in these nonsurveyed areas (which represent about 10% of the total project footprint) would similarly be characterized as generally in "good condition." However, this does not exclude the possibility that there may be areas in or around the project site where this habitat type could be better characterized as either "excellent" or "fair."
20. The loss of habitat, including lithosols, associated with the proposed project has been fully evaluated and mitigated in accordance with the guidelines outlined in the WDFW Wind Power Guidelines (WDFW 2003d) for siting and mitigating wind power projects east of the Cascades. The Applicant proposes to acquire and enhance a 550-acre mitigation parcel that would meet or exceed the required habitat replacement ratios under the WDFW Wind Power Guidelines for both proposed action scenarios. In accordance with these guidelines, the TAC would oversee the project's mitigation and monitoring program and determine if further studies and mitigation measures related to lithosol habitats are warranted. WDFW has concluded that this proposed parcel would provide adequate mitigation for potential impacts on wildlife habitat, including lithosols (see State Agency Letter 2).

21. All proposed habitat mitigation will be evaluated and monitored by the TAC. If monitoring demonstrates that reseedling is not effectively taking root, the TAC will be responsible for recommending additional studies and measures to ensure the effectiveness and long-term success of this program.
22. As described in Section 3.2 of the Draft EIS, the Applicant proposes to protect and restore replacement habitat for the habitat that would be temporarily and permanently disturbed by the project. According to the WDFW, a good faith effort should be made to restore temporarily affected grassland and shrub-steppe areas; however, long-term performance targets should not be imposed because temporal losses and the possibility of restoration failure are incorporated into the acquisition and improvement of replacement habitat (WDFW 2003d). As stated in Response 21 of this letter, if monitoring demonstrates that the reseedling program is not successful, the TAC will be responsible for recommending additional studies and measures to rectify the problem.
23. The project's fire prevention plan will be developed and implemented in coordination with the Kittitas County Fire Marshal. It will contain several measures including but not limited to fire prevention and fire safety training for project personnel with the fire district and with local emergency responders. If the project is approved, the specific details of this plan would be developed through further coordination with the County. Detailed fire protection plans are not usually prepared during SEPA review but rather after project approval and before construction.

Concerns raised by the Kittitas County Fire Marshal regarding equipment and resources necessary to serve the project both during construction and operations are discussed in Local Agency Letter 1. As stated in Section 3.13.4 of the Draft EIS, if emergency fire protection services are required during project operations prior to having an agreement for service in place, the costs of these services could be billed to the project on a cost-recovery basis.

During a meeting between the Applicant and Fire District No. 1, the district expressed concerns regarding access to the project site on Hayward Road in case of a fire and asked if the road would be upgraded for fire prevention purposes. Section 3.13.2 of the Final EIS has been revised to clarify that potential upgrades to the southern portion of Hayward Road are not being discussed or negotiated between the Applicant and Fire District No. 1; however, the Applicant is discussing a fire protection contract with the district for the project.

24. Fires are extremely rare on modern turbines. This happened on turbines in the 1980s primarily due to disc brakes that deployed and overheated. Newer turbines do not have a high-speed disc because of the adequacy of other redundant braking systems.

According to Henrik Kanstrup Jorgensen (Prefiled Testimony, Exhibit 37), “modern turbines are equipped with additional fire safeguards such as lightning arc detection and specially engineered grounding systems and transformer arc detectors, and all electrical equipment meets or exceeds local and international electrical safety standards set forth by

the National Fire Protection Agency (NFPA) and National Electric Code (NEC). Almost all types of modern wind turbines...are also equipped with multiple temperature sensors mounted on parts of the turbine machinery prone to higher temperatures. If the control system detects temperatures outside acceptable limits it will trigger the automatic shutdown of the turbine and send an alarm to the central computer system which will in turn alert on-call service technicians of the fault location, fault code and turbine location.”

The success of these safeguards in eliminating fire risks is demonstrated in the small number of insurance claims filed regarding fire damage. WindPro is the largest single insurance facility in the world offering coverage to more than 18,000 wind turbines. According to WindPro, there have been only two third-party insurance claims processed and paid since 1985 (i.e., claims made by non-owners of the wind facility). These claims were made by landowners and were related to brush fires. A discarded cigarette caused one incident. Field welding that was performed near an older wind turbine caused the other incident (Bernay, Prefiled Testimony, Exhibit 38).

25. As stated in Section 3.4.4 of the Draft EIS, the details of how lubricating oils and other materials would be stored and contained at the construction staging area would be documented in a construction spill prevention and control plan developed and approved by EFSEC before construction begins. This plan would show storage, detention, and response procedures for all potential chemicals used on the site. Spills would be addressed in accordance with the construction spill prevention plan. The potential for hazardous materials spills during project operations is low. It is anticipated that an operation spill prevention control plan will be submitted and approved by EFSEC prior to operation.

Many plans and analyses, such as spill prevention plans, are not developed until later in the EFSEC process, and only if a project is approved by the Governor. Information from these plans will be part of the SCA if the project is approved.

26. Section 3.2.3 of the Draft EIS states that there is little information regarding wind project effects on big game and so it is difficult to estimate the project's effects on wildlife, including mortality rates. The Final EIS references additional elk collaring studies that have since been initiated at other wind farms in southwestern Oklahoma. The study concluded that although disturbance and loss of some grassland habitat due to the wind project was apparent, elk were not adversely affected by wind-power development based on their home range and the quality of their diet (Walter et al. 2006). Given the amount of existing development and corresponding traffic levels in the project area, however, disturbance levels after project operations commence are not expected to greatly affect wildlife. The proposed design reduces the amount of new road construction by improving and using existing roads and trails instead of constructing new roads, thus minimizing potential mortality impacts on wildlife. Furthermore, one of the responsibilities of the TAC will be to monitor impacts on wildlife and habitat and to address potential issues that arise during project construction and operations.

Please note that the Applicant conducted a more thorough road length calculation after the Draft EIS was published. Section 2.2 of the Final EIS has been revised to indicate that the Applicant would construct approximately 13 miles of new roads and up to approximately 8 miles of existing roads would be improved. The resulting amount of temporary and permanent roadway disturbance has been revised in the Final EIS.

27. Thank you for your comment.
28. If implemented as described, the Applicant's proposed construction erosion control measures would be effective in minimizing or eliminating impacts from erosion at the project site. Section 3.1.3 of the Final EIS has been revised to address the effectiveness of the proposed mitigation practices.
29. The Applicant has been proactively working with the Seattle District Corps of Engineers (Corps) to address concerns and issues regarding project impacts on potentially jurisdictional waters and wetlands. The Applicant submitted a revised Joint Aquatic Resource Permit Application (JARPA) for the KVVWPP to the Corps on February 11, 2004, to address four additional underground electrical cable crossings identified after the initial JARPA was submitted in August 2003. The February 2004 JARPA included detailed project drawings illustrating section and plan views of proposed wetland and stream crossings. Based on this new and updated information, total project impacts on wetlands and streams would be 165 and 1,105 square feet, respectively, under both proposed action scenarios.

In the spring of 2004, the Corps determined that the activities described in the February 2004 JARPA are eligible for coverage under Nationwide Permit (NWP) 12 (Utility Line Discharges) (Corps 2004). NWP 12 authorizes the KVVWPP to place dredged or fill material into waters of the United States to construct utility line and road crossings. The Applicant will comply with the terms and conditions required by NWP 12 for impacts on jurisdictional waters and wetlands, and it is expected that compliance with these requirements would satisfactorily mitigate for potential impacts on these resources. In March 2006, the Applicant submitted a request to extend the Corps' 2004 authorization, and to include provisions for an additional stream crossing resulting from changes to the project layout. The Corps authorized the extension and inclusion of the additional storm crossing in April 2006. Sections 1.7.1 and 3.2.4 of the Final EIS have been revised to reflect this new wetland information.

Responses to Comments in State Agency Letter 4 from Stephenie Kramer, Assistant State Archaeologist, Office of Archaeology and Historic Preservation

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the comment letter.

1. In July 2004, Lithic Analysts prepared a report entitled *Cultural Landscapes Investigation and Impacts to Historical Inventory for the Kittitas Valley Wind Power Project*. This report outlined the potential impacts on the North Branch Canal tunnel and other resources eligible for listing in the National Register of Historic Places (NRHP). Lithic Analysts found that the section of the North Branch Canal in the project area was not eligible for inclusion in the NRHP. Russell Holter of the Office of Archaeology and Historic Preservation (OAHP) reviewed this report and concurred with the findings of Lithic Analysts. Because this is not an eligible resource, there will be no effect on historic properties. This updated information has been included in Section 3.8 of the Final EIS.
2. The Applicant has agreed to avoid ground-disturbing activity within 100 feet of all documented cultural resource sites.
3. If any archaeological deposits are observed during monitoring of ground-disturbing actions, the proper protocols, as outlined in this comment, would be observed.
4. A monitoring plan would be developed once the preferred alternative is selected. This plan would outline the procedures to follow in the event of an archaeological discovery. This would be submitted to OAHP for approval and review prior to project construction.
5. Lithic Analysts' findings suggest that there are no eligible historic resources or cultural landscapes that would be directly or indirectly affected by this project. Russell Holter of OAHP reviewed this report and concurred with the findings of Lithic Analysts (letter to EFSEC dated August 10, 2004). This updated information has been included in Section 3.8 of the Final EIS.
6. Please refer to Response 1 of this letter.